nationalgrid

February 3, 2020

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

Re: National Grid LNG LLC, Docket No. CP16-121-000
Fields Point Liquefaction Project
Monthly Status Report for January 2020

Dear Secretary Bose:

On October 17, 2018, the Commission issued the Order Issuing Certificate ("Certificate Order") granting a certificate of public convenience and necessity to National Grid LNG LLC ("National Grid") in the above captioned docket for the Fields Point Liquefaction Project (the "Project"). *National Grid LNG LLC*, 165 FERC ¶ 61,031 (2018). National Grid filed its acceptance of the certificate of public convenience and necessity on October 29, 2018 and the Implementation Plan was filed on November 1, 2018.

As required by Environmental Condition 8 of the Certificate Order, National Grid is submitting the Monthly Status Report for the January 2020 reporting period. If you have any questions about this submission, please contact me at 781-392-6640.

Respectfully submitted,

/s/ Patrick A. Chaney

Patrick A. Chaney
Lead Project Manager – New England LNG
Capital Delivery, Gas – Complex Project Management
Patrick.Chaney@nationalgrid.com

cc: Service List

MONTHLY STATUS REPORT FOR JANUARY 2019

On October 17, 2018, the Commission issued the Order Issuing Certificate ("Certificate Order") issuing a certificate of public convenience and necessity to National Grid LNG LLC ("NGLNG") in Docket No. CP16-121-000 for the Fields Point Liquefaction Project (the "Project"). *National Grid LNG LLC*, 165 FERC ¶ 61,031 (2018). Pursuant to Environmental Condition No. 8 of the Certificate Order, NGLNG provides its monthly status report for the month of January 2020.

Update on Federal Authorizations

As previously reported in the report for December 2018, all required Federal authorizations have been received.

Project Schedule – Construction Status and Work Planned

Work Accomplished in January:

- Training in the Environmental Inspector ("EI") duties occurred four times this month
- Air monitoring in accordance with the Rhode Island Department of Environmental Short Term Remedial Action Plan is ongoing and continued during this month.
- Completed the installation of ductbank #2
- Continued raising site grade to elevation 15
- Continued micropiling in Area C (compressor building)

Work Planned for February 2020:

- Continue micro-piling in area "C"
- Finish micropiling in Area F
- Continue grade-beam installation for underground utilities
- Pour pipe-rack footings #5, 6 and 7
- Backfill Area B for micropile installation
- Heating of forms, rebar and soils prior to concrete pours and maintaining the overnight temperature of poured concrete. Activities to occur during the months of February, March and April. Consultations with FERC staff determined that such overnight activities were within the scope of those activities described in the Environmental Assessment section 2.7.2.2 and therefore are not expected to result in any additional impact to nearby residents.

Problems Encountered and/or Instances of Non-Compliance and Corrective Actions

The problems encountered, contractor nonconformance/ deficiency logs, and each instance of noncompliance observed by the EI during this reporting period are shown below along with the corrective and remedial actions taken and the effectiveness of the implemented actions.

Problems and Noncompliance				
Date	Problem/Noncompliance	Remedial Action Taken	Date of Corrective Action	Effectiveness of Corrective Action
01/08/2020	Crushed stone tracking pad at exit of work zone required maintenance.	Pad roughened.	01/09/2020	Effective, restored tracking pad.
01/08/2020	Minor sheen noticed in three secondary containment.	Sheen removed.	01/13/2020	Effective, secondary containment restored.
01/15/2020	Stone apron of stockpile area to be roughened.	Apron roughened.	01/14/2020	Effective, restored tracking pad.
01/15/2020	Replace Filtrexx Soxx in select areas.	Filtrexx Soxx replaced	01/16/2020	Effective, restored effectiveness of erosion control.
01/25/2020	Minor sheen in secondary containment.	Sheen removed.	01/27/2020	Effective, secondary containment restored.

Releases				
Date	Material and Quantity Released	Cause	Description	Corrective Action Taken
01/07/2020	0.5-gallon Hydraulic oil.	Fitting failure	Hydraulic fitting failed due to fatigue.	Fitting replaced, oil cleaned off of equipment.

Landowner/Resident Complaints

None during this period.

Correspondence Received From Other Agencies Concerning Noncompliance

No correspondence was received concerning instances of noncompliance from other federal, state, or local permitting agencies.

Special Inspector's Report

Construction Activities Observed during the reporting period:

- Completed installation of micropiles in Area M.
- Continued installation of Compressor Building micropiles.
- Began installation of micropiles in Area F.
- Continued placement of mass fill in and around Areas F and M, along with the general area of proposed underground grade beam UG FDN #6.
- Completed construction of Duct Bank 02 and the northern portion of Duct Bank 03.
- Placed backfill material for the northwestern portion of Duct Bank 07

- Completed reconstruction of the MSE revetment support which was dismantled during the installation of a riser for the firewater line at the northeast portion of the site.
- Placed mud mats for East-West Pipe Rack Foundations #5 and #7.
- Began concrete formwork for East-West Pipe Rack Foundation #5.
- Began construction of Duct Bank Foundation #1

Discrepancies reported to Contractors:

- While drilling micropile 5870-M-MP-04 (M-04) at approximately 12 feet below ground surface, pile M-04 began communicating with pile 5870-M-MP-12 (M-12), whereas the drill fluid from pile M-04 was observed exiting the ground along the perimeter of M-12. During grouting operations later in the week, Kiewit placed approximately 15 cf of surplus grout in the void that had developed during the piles' communicating. The corrective procedure was performed prior to the contractor receiving the resolution from RFI-000095, which was submitted to address the issue.

Uncorrected discrepancies reported to Engineer of Record:

- The drilling of micropile 5850-C-MP-40 was halted approximately 15 feet above the design elevation due to encountering a wooden obstruction that refused the advancement of the pile casing. The contractor completed the pile to this elevation. The size and subsequent positioning of the upper casing sections required the contractor to remove 30 feet of casing, an increase of 5 feet from the design requirement. The contractor submitted RFI-000103 to address the usability of the pile and has yet to receive a resolution.

Outstanding NCRs:

See Attached Register

All work requiring special inspection was, to the best of my knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions.

Yes No See discrepancies list above

Special Inspector: Charles Boisvert

Date: January 31, 2020

ATTACHMENT

NON-CONFORMANCE REGISTERS

NON-CONFORMANCE REGISTER - For the registration of NCR Reports

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Project #: 90000130901 **Project Name:** Field Point Liquefaction Project Providence, RI

	OSSQ	Engineering	Procurement	Construction	Quality	Vendor	Material Management	Total Issued
Percentage of Total	12%	16%	32%	16%	4%	16%	4%	100%
Count by Discipline	3	4	8	4	1	4	1	25

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-001	N/A	5/1/2019	Contract section 3.20.6 states the Contractor shall be responsible to store, protect and maintain all equipment.	The equipment as noted above shall be fully inspected by the original equipment manufacturer to what ever extent necessary and then submit to Owner and recommended repairs that should be made	11/15/2019		Vendor	Procurement
SR010-RPT-001A r1	N/A	6/11/2019	Incorrect paint applied on vessels at GCAW was not properly addressed by Kiewit with a NCR per Section 18 of the QMS r3	UOP has agreed to blast the non-compliant vessels to achieve a SSPC-SP10 surface profile and repaint following the manufacturer's recommended procedure to apply a #14 system IZ/HS/HS paint system	7/31/2019		Vendor	Procurement
SR010-RPT-002	N/A	6/23/2019	Section 12.0 of the Kiewit QMS requires all documents that are replaced to be stamped as voided or superseded	Kiewit to follow the Documents Control Procedure 102761-B-DMT-PRO-0001 section 6.3.4 Stamping and Document Notations	11/15/2019		Engineering	Engineering
SR010-RPT-003	N/A	6/23/2019	National Grid requested Kiewit to provide (2) RT film packages for audit purposes related to the GCAW Adsorber PO. These documents were not provided after several requests spanning a (6) week period	National Grid to perform an audit on all RT film at the Vendor's facility	7/31/2019	9/27/2019	Procurement	Vendor
SR010-RPT-004	N/A	7/1/2019	Kiewit did not follow their QMS r3 or contract requirements when changing the location of the load cells for the Micro Pile testing	Kiewit to provide refresher RFI training to field personnel on the RFI process to ensure RFI's are submitted in a timely manner.	9/9/2019	9/9/2019	Contractor	Construction
SR010-RPT-005	N/A	7/3/2019	Piping specifications showed the incorrect NFPA-59A specification. The piping specification showed the 2019 version versus the 2001 version.	Kiewit issued a code revision RFI to NG referencing all piping specifications were revised to remove the NFPA 59A 2019 reference	8/27/2019	9/27/2019	Engineering	Engineering
SR010-RPT-006	N/A	7/30/2019	Kiewit's Procurement Plan requires non-conforming materials received to be placed in a Quarantine area and/or marked as do not use.	Place the referenced piping into the specified quarantine area and properly mark as do-not-use	10/21/2019	10/21/2019	Contractor	Material Management
SR010-RPT-007	N/A	8/1/2019	Kiewit did not notify National Grid for the off-site testing of the Feed Gas Booster Compressor in accordance with Section 2.23 of the Contract.	Procurement and OSSQ shall review the requirements for notification of off-site testing to ensure National Grid is properly notified in the required time frame.	11/15/2019		Procurement	Quality

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-008	N/A	8/2/2019	Incorrect hydro test pressure and hold time for firewater line. Test was not conducted in accordance with NFPA 24.	The firewater spools in question will be retested in the overall firewater system test to be performed on site at a later date. No further action required	9/27/2019	9/27/2019	Engineering	Engineering
SR010-RPT-009	N/A	8/5/2019	Kiewit is required to notify National Grid per the Master ITP on Hold and Witness points. NG was not notified for the First Shipment of Piping Fabrication	Revisit the requirements for Client notification of vendor testing with all personnel related to the requirement, document the training and provide NG with a responsibility matrix to ensure proper notification is achieved.	11/15/2019		OSSQ	Procurement
SR010-RPT-010	N/A	8/8/2019	Kiewit is required to provide the off-site vendors with the requirements of the contract between National Grid LNG LLC and Kiewit Power Constructors Co. Section 3.10 Welding Requirements was not conveyed to ABB for off-site construction.	Vendor ABB submitted weld procedures as required	8/8/2019	9/27/2019	Procurement	Procurement
SR010-RPT-011	N/A	8/8/2019	Section 3.21.23 Document Management and Control states the Contractor shall provide a fully functional, integrated, electronic data and document management system.	Kiewit has provided a system using SharePoint for that allows updates to review documents and corrdinates with Document Control	1/15/2020	1/15/2020	Contractor	Engineering
SR010-RPT-012	N/A	8/14/2019	Section 7.2 Procurement Strategy of the prime Contract requires a Supplier shipment to be inspected by the Contractor to ensure compliance with Project Specifications. The first shipment for the UG piping did not receive a final release shipment				OSSQ	Procurement
SR010-RPT-013 R1	N/A	8/20/2019	Prime Contract Attachment 7 requires APCI to comply with NFPA 59A. A data review of the quality documents noted the actual NDE performed was not in compliance with the NFPA 59A requirements. A review of documentation for the Cross over Bridge piping did not reflect this requirement. Revision 1 added the contract requirements noted in Section 3.10 - SOW				Vendor	Vendor
SR010-RPT-014	N/A	8/20/2019	Prime Contract Section 3.10 Scope of Work requires all procedures for welding of piping, vessels and equipment performed off-site shall be submitted to the Owner for review and approval prior to construction.	Kiewit will comply with the requirements of the Prime Contract	9/27/2019	11/15/2019	Vendor	Vendor
SR010-RPT-015 R1	N/A	8/20/2019	Prime Contract Attachment 7 requires APCI to comply with NFPA 59A. A data review of the quality documents noted the actual NDE performed was not in compliance with the NFPA 59A requirements. A review of documentation for the Cold Box piping did not reflect this requirement. Revision 1 added the contract requirements noted in Section 3.10 - SOW	Evaluate the correct NDE requirements as required by NFPA-59A-2001 and perform the necessary aditional NDE as required to meet compliance for the Cold Box fabrication.			Vendor	Vendor

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-016	N/A	8/27/2019	UOP/GCAW equipment data books were reviewed by National Grid and found to be non-compliant with contract requirements	Kiewit shall review the data books for the equipment as mentioned above and perform the necessary tasks so the data books comply with contractual requirements.			Vendor	Procurement
SR010-RPT-017	N/A	8/27/2019	UOP/Fabsco equipment data books were reviewed by National Grid and found to be non-compliant with contract requirements	Kiewit shall review the data books for the equipment as mentioned above and perform the necessary tasks so the data books comply with contractual requirements.			Vendor	Procurement
SR010-RPT-018	N/A	8/28/2019	Kiewit Site Specific Procurement Plan requires all contracts with risk level of 4 or 5 to conduct kick-off meetings upon execution of the contact.	Kickoff meetings with all suppliers signed up pre-suspension rated as 4 or 5 on the Master ITP have had kickoff meetings pre-suspension and during project re-initiation. An additional Prefab Quality meeting will be held as indicated in MITP	9/27/2019	11/15/2019	Procurement	Procurement
SR010-RPT-019	N/A	9/23/2019	Kiewit Site Specific Procurement Plan requires development of a Master ITP Plan including Witness and Hold Points, FAT Test, quality audits and any additional recommended in-process shop inspection. These activities shall include dates.	Kiewit is to provide an updated and completed Master ITP that complies with the requirement as noted in the Project Specific Procurement Plan 102761-B-QLT-PLN-002	11/15/2019		Procurement	OSSQ
SR010-RPT-020	N/A	10/3/2019	A ground Water monitoring well (mw) was identified in Kiewit's work area for Field Point Liquefaction Project in an area that required placement of several feet of fill. National Grid SIR provided guidance to Kiewit on closure of the mw in accordance with RI DEM requirements, prior to placement of the fill material. Kiewit did not follow proper closure procedures and did not notify On-site environmental for required oversight of mw closure procedure.	Kiewit is to notify National Grid SIR with proposal to locate and properly close the ground water monitoring well in accordance with RIDEM requirements. The mw closure shall be witnesses and approved by the National Grid SIR representatives.	11/15/2019	11/15/2019	Contractor	Construction
SR010-RPT-021	Civil 102519-002	11/1/2019	During the course of the Civil Audit #102519-002 performed at site; Checklist Item 4.0 (c) Has proof rolling been approved by the Geotechnical Engineer in coordination with the Field Representative? The audit team stated that the Geotechnical Engineer was not notified in accordance with Section 4.9 of the Earthwork Specification – 102761-B-CIV-SPC-0001. The audit team was unable to provide documentation supporting the requirement was met.				Contractor	Construction
SR010-RPT-022	Civil 102519-002	11/1/2019	During the course of the Civil Audit #102519-002 performed at site; Checklist Item 3.0 (g) Does the Geogrid meet the requirements as required by Earthwork Specification section 3.12. Documentation showing approval for the Geogrid materials was not provided prior to construction and were subsequently approved by the Geotechnical Engineer on 10/24/2019 which is after the placement of the materials. The audit team was unable to provide documentation supporting approval prior to the start of construction.	Obtain approval form the EOR for use of Geo-Tec material	1/7/2020	1/7/2020	Contractor	Construction

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-023		11/4/2019	On October 11, 2019 Kiewit and National Grid attended a shop inspection to witness hydro testing of the L9020-A/B N2 storage vessels located at Chart Ind. New Prague, MN. Upon arriving, the (2) vessels of interest were set up to conduct a cold-stretch test in accordance with ASME Section VIII Appendix 44. The subsequent Off-Site Vendor Surveillance report 191011 per OSSQ stated that Chart conducted a Cold Stretch Test in Lieu of a hydro and further referenced ASME Section VIII Div. 1 Appendix 44 as reference. A review of the 2017 version of Mandatory Appendix 44 states in *44-6.1 (f) ...the pressure test required by UG-99 or UG-100 shall be applied after all welding on the pressure retaining parts.*. . Kiewit has not provided National Grid written proof that a hydro test was performed and documented on the vessels in question.	Kiewit to provide National Grid proof that a hydro test was conducted as required by ASME VIII Div.1 or have Chart perform a hydro as required. National Grid will be notified as required to attend the testing of the vessels in question.	11/15/2019		Vendor	OSSQ
SR010-RPT-024		12/21/2019	Section 3.10 of the Prime Contract NUMBER 4400005216 requires Kiewit to submit all welding procedures for piping, vessels and equipment performed off-site to Owner (National Grid) prior to start of construction. Kiewit Is required to review the welding procedures for project compliance prior to submittal for National Grid review. The welding procedures for IFS's subcontractor, Transend were not submitted to Owner for approval after review by Kiewit.				Contractor	OSSQ
SR010-RPT-025								

Kiewit

Non-Conformance Log

FPLP

Fields Point Liquefaction

National Grid

104012

NCR No.	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Action By	Disposition & Required Actions	Recommended Preventative Actions	Date Issued	Date Disposition Submitted	Date Disposition Approved	Date Closed
0001	Concrete Driven Pile DP-13 hit an obstruction and shifted during operation and causing pile to be approximately 2.4744" out of tolerance per specification at 6"		Kiewit		**Use-As-Is** EOR approval for out of tolerance per specification	No action to be taken	5/28/2019	6/26/2019	6/26/2019	6/26/2019
0002	Damage to upper concrete driven pile DP-70 during pile driving activities, damage is just above the Emeca splice plate, resulting in exposed rebar and a 2' crack protruding up the south east side of the column, extending from the break.		Kiewit		**Rework or Scrap** EOR to determine action to be taken per specification 102761-B-STR-SPC-0006 section 4.5.4.1.12	EOR to notify Quality of resolution	6/6/2019	8/13/2019	8/13/2019	8/13/2019
0003	During installation of DP 113 the toe of the pile started to walk to the west. Crew attempted to correct the out of plumbness during driving but could not correct enough to get back in tolerance. As the pile sits now it is 1 3/8" in 4' equating to 2.86% or .86% out of tolerance.		Kiewit		**Rework** Rejected piles shall be corrected as directed by the engineer of record.		6/11/2019	6/26/2019	6/26/2019	6/26/2019
0004	Regeneration Gas Seperator LDD-1011 was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1200 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit		**Rework** Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/16/2019	6/14/2019	6/14/2019	
0005	Adsober L-1000A was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1200 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit		**Rework** Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/16/2019	6/14/2019	6/14/2019	
0006	Adsober L-1000B was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1200 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit		**Rework** Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/16/2019	6/14/2019	6/14/2019	
0007	Adsober L-1000C was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1200 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit		**Rework** Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/16/2019	6/14/2019	6/14/2019	
0008	Particle Filter LDS - 1010 A, was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1000 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Rejected / Does not agree with the disposition Re-coating will be performed to alow NDE to be reworked. Re-coating shall be performed as per 102761-B-MEC-SPC-0069 AND 0070	Kiewit	OSSQ	**Rework** Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/22/2019	12/17/2019		
0009	Particle Filter LDS - 1010 B, was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1000 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Rejected / Does not agree with the disposition Re-coating will be performed to alow NDE to be reworked. Re-coating shall be performed as per 102761-B-MEC-SPC-0069 AND 0070	Kiewit	OSSQ	**Rework** Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/22/2019			
0010	Failure to meet pressure testing requirements as outlined in specification NFPA 59A 2001 Edition		Kiewit		**Rework** Testing plan shall be developed to provide re-testing at Barnhart Hake facility including pressure testing procedure to require 1.25 X MAWP, equipment mobilization manpower and safety plan and PPE to be used. See attached letter and instructions.	To be provided by APCI	6/18/2019	6/18/2019	6/18/2019	

NCR No.	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Action By	Disposition & Required Actions	Recommended Preventative Actions	Date Issued	Date Disposition Submitted	Date Disposition Approved	Date Closed
0011	Companders K-The equipment maintenance and preservation for the Companders 1CS-V200 as required by Air Products and Chemicals, INC. was not followed and properly documented. Request have been previously made to produce verifiable documentation that would support proper maintenance and preservation activities during the period of January of 2018 through the date of this NCR. Specific requirements in accordance with FPLP-APCI Compander Storage Procedure and CryoMachinery Preservation Checklist Installation through start-up CMD-0177d Ref. CMD-0177a & CMD-0177b have not been followed and subsequently documented.210 & K-220		Kiewit	OSSQ	**Rework** Consultation with equipment manufacturer and owner to determine inspection steps that would identify any potential equipment damage. 1. New preservation procedure is to be submitted for both off-site and on-site storage encompassing requirements through commissioning. 2. Quarterly preservation inspections of all identified equipment must be performed and report submitted to Kiewit and National Grid.	Follow Written procedures	6/19/2019	11/23/2019		
0012	The equipment maintenance and preservation for the K-131 Nitrogen Recycle Compressors as required by Air Products and Chemicals INC. was not followed and properly documented. Request have been previously made to produce verifiable documentation that would support proper maintenance and preservation activities during the period of January of 2018 through the date of this NCR.		Kiewit	OSSQ	**Rework** Consultation with equipment manufacturer and owner to determine inspection steps that would identify any potential equipment damage. 1. New preservation procedure is to be submitted for both off-site and on-site storage encompassing requirements through commissioning. 2.Atlas Copco needs to provide Technician to site to evaluate compressor condition and compliance to proper preservation procedures. 3. Quarterly preservation inspections of all identified equipment must be performed and report submitted to Kiewit and National Grid.	Follow Written procedures	6/19/2019	11/23/2019		
0013	The equipment maintenance and preservation for Air Cooled Heat Exchangers E-2131, E-2141, E-2151, & E-2135 required by Air Products and Chemicals INC. was not followed and properly documented. Request have been previously made to produce verifiable documentation that would support proper maintenance and preservation activities during the period of January of 2018 through the date of this NCR	Nitrogen Lube Oil Cooler 1CS-E137 Compander Lube Oil 1CS-E10	Kiewit	OSSQ	**Rework** Consultation with equipment manufacturer and owner to determine inspection steps that would identify any potential equipment damage. 1. New preservation procedure is to be submitted for both off-site and on-site storage encompassing requirements through commissioning. 2. Quarterly preservation inspections of all identified equipment must be performed and report submitted to Kiewit and National Grid.	Follow Written procedures	6/19/2019	11/23/2019		
0014	As Kiewit was cutting off piles to elevation the first, two or three feet, voids in top of concrete piles were discovered on two separate piles with numbers mentioned in the Reference Documentation above.		Kiewit		**Repair** Repair to Standard - Recommend using Sikadur 42, Grout-pak Pt, per manufatures recommendations to fill voids.	Kiewit's Concrete Engineer is communicating to Oldcastle (Supplier) to remedy the cause and ensure voids don't occur again. Oldcastle will be doing a training with their staff.	8/27/2019	9/10/2019	9/10/2019	9/11/2019
0015	Pile iniatally inspected and there were no cracks. We started driving the top piece and noticed the crack. The crack went down about 20' and the corner of the pile chipped off 20' down. Once pile chipped we continued driving to grade.		Kiewit		**Scrap** Drive another pile within 28" (center to center) in any dircetion of the pile that cracked.	Unknown. We believe it was a flaw with the concrete that was not visible to the naked eye.	6/27/2019	7/8/2019	7/8/2019	7/8/2019
0016	14" Pre-Cast Pile were cut off short by 2 inches to 3 inches out of Tolerance. Specification Cut-off tolerance shall be within 1 inch of the required elevation shown in the contract documents.		Kiewit		**Use-As-Is** Propose when performing the back filling and installing the Tensar wall that we do one 12 inch lift, one 9 inch lift and one 6 inch lift this would bring us back to design elevation.	To prevent from recurrence Control Point (3rd party surveyor) are shooting in bench marks then by using a laser level laying out the cut lines.	7/10/2019	7/15/2019	7/15/2019	9/11/2019
0017	Air Content was observed as being 3.3% per the required 4.5%-7.5%. Resulting in failure per the mix design.		Kiewit	Engineering	**Use-As-Is** Request EOR evaluation and / or approval. Speak with concrete supplier about air content concerns.	If air test fails initially, take new sample and re-perform air content test. If test fails for second time, truck will be rejected.	9/30/2019			
0018	Air Content was observed as being 4.0% per the required 4.5%-7.5%. Resulting in failure per the mix design.		Kiewit	Engineering	**Use-As-Is** Request EOR evaluation and / or approval. Speak with concrete supplier about air content concerns.	If air test fails initially, take new sample and re-perform air content test. If test fails for second time, truck will be rejected.	9/30/2019			
0019	On September 17th 2019 a quality document and NDE review was performed at GCAW shop in Humble, TX. Attendees included, Robert Poche, Alex Devine, Robert Johnson, Gene Johnson, and Al Noriega. It was discovered during this review that the volumetric examination records and radiograpic film were found to be non-compliant to the mandatory essential variables as per ASME Sec. VIII and ASME Sec. V requirements including but not limited to, film quality, film denisty, IQI placement and identification, etc. Reader sheets / Reports were found to not meet minimum requirements as per ASME Sec. V		Kiewit	OSSQ	**Rework to Acceptable Standard** Volumetric examination to be performed in conformance with code and contractual requirements 1. NDE must be re-performed in compliance to the contract specification. 2. NDE procedures and operator qualifications must be submitted for review. 3. This rework will take place after blasting and before recoating of vessels. Kiewit and National Grid will be in attendance for first operation.	Proper NDE review must be performed by supplier to assure conformance of sub-vendor to code and contractual requirements. OSSQ oversight of proper film and documentation reviews performed during in-process inspections.	9/30/2019	11/15/2019		
0020	Fill materials were brought on-site from the PJ Keating quarry, it was discovered after dumping the load the 1 1/2" dense grade material was unapproved and would not meet the standards for FPLP.		Kiewit		**Scrap** Kiewit to take another test sample from the stock pile at PJ Keating as well as witness an in-process sieve analysis in conjunction with National Grid's Special Inspector. If material is deemed unsuitable for use the stock piles shall be separated to prevent another delivery of unsuitable fill.	Action to prevent recurrence: Kiewit has communicated to the vendor that any new materials not previously tested and approved from PJ Keating's stock pile to the project, shall be tested and approved before use. Kiewit will be conducting random visits at PJ Keating's Quarry.	10/9/2019	11/23/2019	1/13/2020	1/13/2020
0021	Craft proceeded cutting 16" concrete driven piles 5871-D-DP-25 & 5871-D-DP-26 without confirming pile cutoff elevations accordingly, resulting in two piles approximately 18" below actual elevation.		Kiewit		**Use-As-Is** All pile cutoffs haulted until survey marks pile cutoff elevations in front of pile cutting crew and per RFI-000075, attached.	Action to prevent recurrence: Have survey crew mark each individual pile then tie with green flagging around piling signifying pile cutoff elevations were marked before commencing cutting of pile.	10/15/2019	11/23/2019	1/10/2020	1/10/2020

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0022	Upon cutting off of the 16" driven concrete piles it was found that the tension connector tubes were not in the correct location within the pile per Dwg. 102761-B-00-0000-STR-SF-6021 Rev.3 Gen. Notes 8. has a tolerance of +1/8"		Kiewit		**Use-As-Is** Engineering to provide recommendation and path forward.	The lack of support templates being used during fabrication. Kiewit has advised the fabricator of the findings and advised them of the need for additonal support. Kiewit will also be preforming a shop visit to ensure the fabricator has addressed the issue.	10/16/2019	1/8/2020	1/16/2020	
0023	During review of Duct Bank 5, Sections 1, 2, & 3 - the undergound utility warning tape installed is, 3" wide and approximately 100' total placed. Per specification 102761-B-CIV-SPC-0001; states in section 3.10, "Tape shall be six (6) inches wide."		Kiewit	Engineering	**Use-As-Is** Discontinue using the currently installed 3" wide utility warning tape and use the required 6" wide tape specified in the 102761-B-CIV-SPC-0001	Ensure all specifications are reviewed and cross referenced as necessary by all involved. Make sure any questions are answered before material is installed.	10/22/2019	1/22/2020	1/23/2020	1/23/2020
0024	Material delivered on-site from P.J. Keating was a new material (not existing) which was tested and failed to meet the requirements per specification 102761-B-CIV-SPC-0001 section 3.1		Kiewit		**Reject/Scrap** Non-conforming material was rejected and returned, Kiewit and National Grids Quality Manager conducted an off-site visit at P.J. Keating to further assess the stockpile of the material.	Deliveries will contine to be monitored and P.J. Keating is to clearly segerate Kiewit's approved stockpile from any other new materials.	10/24/2019	1/14/2020	1/14/2020	1/14/2020
0025	Atlsa Copco Air Cooled Heat Exchanger was pressure tested to 1.3 instead of the 1.5 required	1. Re-testing will be performed at AXH to 1.5 X MAWP. Kiewit and National Grid will be in attendace for testing.	Kiewit		**Rework to Acceptable Standard** Retest Heat Exchanger to correct Pressure	Verifiy the supplier follows test requirments	11/1/2019	1/10/2020	1/14/2020	1/14/2020
0026	The Gas Heater was preserved under a N2 purge with positive pressure of 12-15 psig at the end of fabrication. The purge was physically monitored weekly . However there was no log or record kept of the monitoring. **NCR assigned to Taylor Forge**	1. New preservation procedure shall be submitted and approved. Inspections will be conducted weekly and documented. Inspection documentation will be submitted monthly. 2.100% Internal VT will be performed at time of re-work, borescope will be required where applicable. 3.ITP shall be submitted by UOP/Taylor Forge including VT hold point and final inspection of vessels before shipment.	Kiewit	OSSQ	The supplier will maintain a record of inspection starting September 2019. The heater will be internally inspected for condition and documented The inspection will be insured via the hold point from the ITP.		11/1/2019	11/23/2019		
0027	During concrete testing prior to pouring Duct Bank 5 - Section 4, Fenagh Inspector was asked to take the temperature of the concrete and said, he did not have a thermometer with his testing equipment, Temperature is required per Fenagh's procedure and ACI 301. Infrared Gun was used to verify temperature externally at 58 deg. F. which is not acceptable per ACI 301/ASTM C1064.	Ask EOR to review and accept concrete as-is.	Kiewit	Engineering	**Use-As-Is** Fenagh testing agency was unprepared, no checks to verify equipment was on-site, and concrete trucks were not rejected when all testing was not completed.	Action to prevent recurrence: Kiewit to Inspect Fenagh's testing equipment prior to each test to verify all equipment is on-site before testing is performed, regroup the team and discuss stop work authority. Fenagh to review their procedures internally with all technicians.	11/5/2019			
0028	During the cutting operation of concrete piles, survey (A-Plus) reported pile 5953-L-DP-09 was cut-off approximately 6ft below elevation. Proposed Cut-off=18.75 Actual=13.17. Piles in that run of grade-beam had been being cut-off at approx.13ft as the location was below grade, cuts made on the other adjacent piles were preliminary cuts and not final cuts.	Abandon driven pile 5953-L-DP-09 and replace with Micropile(s) per direction of EOR.	Kiewit		**Reject/Scrap** Pile cut short had been marked by survey, verified cut-off location approximately 8ft in the air. Slurry from adjacent pile cutting may have obscured the pile cut off mark.	Using piledriver at motocut finalizing alignment prior to proceeding with cut. Survey will be verifying height same day as cut. No more 'preliminary' cuts, remaining cuts are at final height.	11/9/2019	11/23/2019	1/21/2020	
0029	After grouting operations were completed on micropiles 5850-C-MP-08 & 5850-C-MP-28 centerbars being placed ended up leaning to an out-of-tolerance location horizontally within the casing.		Kiewit	Engineering	**Use-As-Is** After grouting, the centerbar generally extends from the ground surface to the soils at the pile tip. However, since approximately 25 to 30 feet of casing has been pulled, the casing does not extend to the bottom of the hole, but is held in place by skin friction in what is generally considered to be the unbonded zone. To prevent the casing from dropping back down the hole until the grout is set and can support it, a temporary pile cap is connected from the centerbar to the casing to hold the casing in place until initial set of the grout has occurred. For the piles identified, either due to accidental and undetected shifting the top of the centerbar during the connection of the temporary cap or after the cap has placed and the pile is no longer being monitored (due to loads imposed by the casing), the location of the center bar shifted.	Fabricate wooden templates to ensure center bar is centrally located within tolerance of micropile casing / In addition, we have developed a method of wiring the rod in the center using the holes in temporary casing that holds the casing. Either method is anticipated to eliminate this problem. We will also measure the annular distance between the bar and the casing.	12/2/2019			
0030	During driving of concrete piles an obstruction was encountered and forced two piles (5900-D-DP-01 & 5900-D-DP-06) out of tolerance and one (5900-D-DP-01) of the two piles out of plumb.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0031	During driving of concrete piles obstructions were encountered and forced seventeen (17) piles (5871-D-DP-04, 5871-D-DP-09, 5871-D-DP-14, 5871-D-DP-18, 5871-D-DP-21, 5871-D-DP-24, 5871-D-DP-26, 5871-D-DP-27, 5871-D-DP-28, 5871-D-DP-32, 5871-D-DP-34, 5871-D-DP-35, 5871-D-DP-36, 5871-D-DP-41, 5871-D-DP-43, 5871-D-DP-44, 5871-D-DP-45) out of tolerance and two (2) (5871-D-DP-03 & 5871-D-DP-08) piles out of plumb.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0032	During driving of concrete piles obstructions were encountered and forced seven (7) piles (5620-F-DP-05; 5620-F-DP-12; 5620-F-DP-21; 5620-F-DP-24; 5620-F-DP-27; 5620-F-DP-28; & 5620-F-DP-31) out of tolerance.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0033	During driving of concrete piles six (6) piles (5620-F-DP-17; 5620-F-DP-24; 5620-F-DP-25; 5620-F-DP-26; 5620-F-DP-28; & 5620-F-DP-29) did not meet the blow count (driving criteria) per 25ft embedment.		Kiewit		Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	1/21/2020	1/21/2020	1/21/2020
0034	During driving of concrete piles obstructions were encountered and forced one (1) pile (5640-F-DP-03) out of tolerance.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			

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0035	During driving of concrete piles obstructions were encountered and forced five (5) piles (5560-G-DP-01; 5560-G-DP-03; 5560-G-DP-04B; 5560-G-DP-05B; & 5560-G-DP-09;) out of tolerance.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0036	During driving of concrete piles obstructions were encountered and forced one (1) pile (5980-I-DP-09;) out of tolerance.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0037	During driving of concrete piles obstructions were encountered and forced two (2) piles (5952-L-DP-03 & 5952-L-DP-09) out of tolerance.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0038	During driving of concrete piles obstructions were encountered and forced two (2) piles (5953-L-DP-19 & 5953-L-DP-21) out of tolerance.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0039	During driving of concrete piles obstructions were encountered and forced one (1) pile (5951-L-DP-14) out of tolerance.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0040	During driving of concrete piles obstructions were encountered and forced two (2) piles (5870-M-DP-03 & 5870-M-DP-09) out of tolerance.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020			
0041	Upon cutting off of the 16" driven concrete piles it was found that the tension connector tubes were not in the correct location embedded in the pile, per Dwg. 102761-B-00-0000-STR-SF-6021 Rev.3 Gen. Notes 8. has a tolerance of +1/8"		Kiewit		Engineering to provide recommendation and path forward.	The lack of support templates being used during fabrication. Kiewit has advised the fabricator of the findings and advised them of the need for additonal support. Kiewit will also be preforming a shop visit to ensure the fabricator has addressed the issue.	10/16/2019	1/8/2020	1/16/2020	
0042	5870-M-MP-03 was drilled an additional 5 feet in depth total (it achieved a tip elevation of approximately -78.8 feet and the minimum required elevation was -70 feet). As scheduled, 25 feet of casing was pulled. However, with the extra five feet of drilling, we have a total of 70.7 feet of casing on the pile, which is 6.4 feet more than the casing length given for the pile on Sheet 102761-B-00-0000-STR-SF-5872. The tolerance for the casing length is plus or minus 3 feet. Due to length of the subsequent casing sections, pulling an additional 5 feet of casing out (30 total) was not a readily available option for this pile.		Kiewit	Engineering	Started drilling micropile 5870-M-MP-03 on 12/31/19. The piles in Area M were all drilled with 100.7' of casing, some with different sequencing in order to utilize all the casing available on site. The previous two holes had been drilled with the same sequencing and 5870-M-MP-03 was supposed to be drilled with the same sequencing. In order to use the casing already available at the drilling location, a 10' casing was used where a 5' casing had been used on the previous two shafts. The shaft was drilled 55' when operations ceased for the holiday and resumed two days later on 1/2/20. When operations resumed, the sequence of casings was continued as if there was a 5' casing in the spot where there was actually a 10' casing, therefore resulting in an additional 5' being drilled.	Following a long weekend/holiday, tool-box talks will be conducted with craft during their morning stretch and flex activities prior to starting work.	1/9/2020			